Berkeley SafeTREC SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER



TRAFFIC SAFETY FACTS

Drug-Involved Driving

—Katherine L. Chen, Bor-Wen Tsai, Garrett Fortin, and Jill F. Cooper—

INTRODUCTION

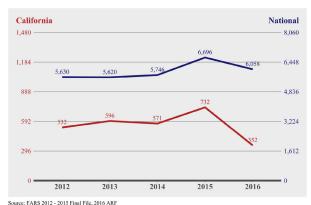
The use of cannabis and prescription and other drugs are increasingly prominent on our roadways, where 16.2 percent of the nation's 37,461 fatalities in 2016 were related to drug-involved driving. In the United States, several states have legalized the use of medical and/or recreational cannabis, increasing concerns about traffic safety. Aside from alcohol, cannabis is the most frequently detected drug in drivers who are involved in collisions. The impact of drugs on the brain and behavior varies considerably depending on the type of drug and how it is metabolized. There are also large variations across jurisdictions in the frequency of testing suspected impaired drivers for drugs, the consistency of laboratory drug testing practices, and the capacity of law enforcement. In the United States, 6,058 people were killed in drug-involved collisions in 2016, a 9.5 percent decrease from 6,696 in 2015, and a 7.6 percent increase from 5,630 in 2012. In 2016, among fatally injured drivers with known drug tests, 42.7 percent were positive for legal or illegal drugs.

CALIFORNIA FACTS

CALIFORNIA DATA

- There were 352 fatalities resulting from druginvolved collisions in 2016, a 51.9% decrease from 732 in 2014, and a 33.8% decrease from 532 in 2012. However, based on the nearly double increase in figures between preliminary and final report of 2015, the final 2016 figure may change substantially.
- California's 2012 Roadside Survey of Alcohol and Drug Use by Drivers found drug prevalence to be 14.0%, twice that of alcohol (7.3%). NHTSA's 2013-2014 National Roadside Survey of Alcohol and Drug Use by Drivers supports this finding among weekend nighttime drivers tested, 8.3% were alcohol positive while 15.2% tested positive for cannabis or any illegal drug and 7.3% tested positive for medications.
- In 2016, California voters passed a ballot initiative that legalized the sale and use of recreational cannabis, and legal sales of cannabis began in some jurisdictions in 2018. Based on patterns following similar laws in Colorado and Washington, the number of druginvolved drivers is expected to increase.
- The highest number of fatal and severe injuries from drug-involved driving collisions occurred in the southern part of the state—Los Angeles, Orange, Riverside, and San Diego counties. Conversely, the highest rate of fatal and severe injury from drug-involved driving collisions by population were concentrated in the more rural parts of the state in Alpine and Modoc counties.

Drug-Involved Driving Fatality Trends, Nationwide and California, 2012-2016



Drug-Involved Driving Fatal & Severe Injury and Fatal & Severe Injury per 100K Population by County, 2016



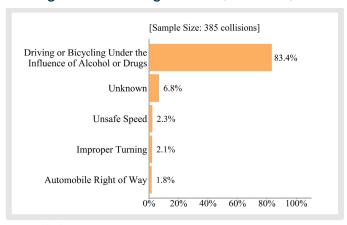
(a) Number of Fatal and Severe Injuries (b) Number of Fatal and Severe Injuries per 100,000 Population Source: FARS ARF 2016; Provisional SWITRS 2016; California Department of Finance 2016

CALIFORNIA DATA

(continued)

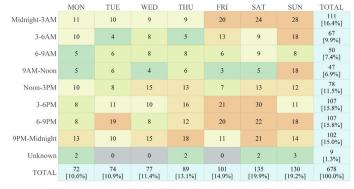
- The majority (83.4%) of the primary collision factors for drug-involved collisions comprise driving or bicycling under the influence of alcohol or drugs.
- Hit object was the most prevalent type of druginvolved crash (38.2%). The next two most common collision types were head-on (18.4%), and broadside (14.8%).
- Drug-involved fatal and severe injuries varied greatly by day of week and time of day. Nearly 40% of drug-involved fatal and severe injuries occurred on Saturday or Sunday. Though comprising only 12 hours (7.1%) of the week, Saturday afternoon into the night (3pm to 3am) accounted for 14.9% of all drug-involved fatal and severe injuries.
- Drug-involved fatal and severe injury victims were predominantly young male adults (age 15-44), comprising 50.8% of all victims.
- Over half (55.1%) of all drug-involved fatalities occurred on non-interstate principal arterials (high-capacity urban roads). The next most common roadway type was non-interstate minor arterial (16.8%).
- In 2016, just under three-quarters (72.7%) of drug-involved collision fatalities occurred in passenger vehicles, while 25.3% were on motorcycles, and 2% involved other vehicle types.

Top Five Primary Collision Factors, Fatal & Severe Injury Drug-Involved Driving Collisions, California, 2016



Source: Provisional SWITRS 2016

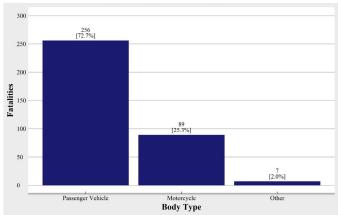
Time and Day of Week for Drug-Involved Driving Fatal & Severe Injury, California, 2016



FSI Num+% 0 1 - 5 6 - 8 9 - 11 12 - 17 18 - 30

Source: FARS ARF 2016; Provisional SWITRS 2016

Vehicle Type for Drug-Involved Driving Fatal Injury, California, 2016



Source: FARS ARF 2016

REFERENCES

- Lipari, R.N., Hughes, A. and Bose, J. (2016). Driving under the influence of alcohol and illicit drugs. The CBHSQ Report. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.
- Center for Behavioral Health Statistics and Quality. (2017). 2016 National Survey on Drug Use and Health: Detailed Tables. Substance Abuse and Mental Health Services Administration, Rockville, MD.
- Hedlund, J. (2017). Drug-Impaired Driving: A Guide for What States Can Do. Washington, DC: Governors Highway Safety Association.
- Lacey, J. H., Kelley-Baker, T., Berning, A., et al. (2016). Drug and alcohol crash risk: A case-control study (Report No. DOT HS 812 355). Washington, DC: National Highway Traffic Safety Administration.
- Berning, A., Compton, R., & Wochinger, K. (2015). Results of the 2013–2014 National Roadside Survey of alcohol and drug use by drivers. (Traffic Safety Facts Research Note. Report No. DOT HS 812 118). Washington, DC: National Highway Traffic Safety Administration.
- Hartman, R.L. & Huestis, M.A. (2013). Cannabis Effects on Driving Skills. Clin Chem. 59(3):478-92.
- Lacey, J.H., Kelley-Baker, T., Romano, E., Brainard, K., and Ramirez, A. (2012, November.) Results of the 2012 California Roadside Survey of Nighttime Weekend Drivers' Alcohol and Drug Use. Calverton, MD: Pacific Institute for Research and Evaluation.
- California Department of Transportation. (2018, March). California Public Road Data 2016